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RECOLLECTION OF MEETINGS WITH KUNIO KAWAGOE

Alexander F. Robertson

I would like to contribute comments in recognition of Kawagoe san. I was very surprised, but pleased, to learn of an inpersonation of me which took place last year at the Ottawa meeting at the Fourth International Symposium of Fire Safety Science, at which I was presented the "Kawagoe Medal." I have tried to understand why I was singled out for this honor. I plan in this brief talk to present you with a partial explanation for this.

I was employed at the National Bureau of Standards (NBS) in May 1950 by Douglas Parsons, Chief of the newly established Building Technology Division. The NBS fire activities were then being reorganized in this Division following the retirement of Simon Ingberg. Parsons had made it clear that he expected me to try to upgrade fire safety through engineering science, rather than through ad hoc routine tests. He further expected me to see that work I and associates might accomplish would be incorporated in written documents. He had apparently been visited by Dr. Fujita of the Building Research Institute in Japan, who had furnished him with reports of pioneer work done there on building fire problems. These, as I recall, were primarily related to ventilation characteristics of openings in compartment walls. It was clear to me that we were expected to reciprocate whenever we could contribute.

At that time, and even today, any formal NBS publication had to survive a rather lengthly approval process. However, documentation of our findings might be in the form of NBS Technical Reports (*gray backs*). These were considered semi-classified documents for limited distribution. With Parsons agreement, we developed a mailing list through which we circulated copies of these to laboratories, on an exchange basis, doing work related to ours. Of course, we were careful to avoid releasing reports containing classified or proprietary information.

In October 1957, Professor Toshiro Kimbara of the University of Tokyo visited Washington to contribute to an early meeting of the Committee on Fire Research (CFR) of the National Academy of Sciences, National Research Council (NAS/NRC). I met him there and invited him to visit us at NBS. He arrived on 4 November and we showed him work we had in progress. At the CFR meeting we had been told of works underway both at his University and by others at the Building Research Institute in Japan. Kimbara visited us again with Siguro Yokoi two years later on 11 November, 1959 (see photograph).

From this time on, we sent information on our work on the fire problem in the form of *gray backs* and received numerous copies of their work in Japan. Through these documents, we first learned of Kawagoe's and others work in Japan.

I feel confident that Kawagoe, then at the Building Research Institute of Japan, received information on our work from the reports we forwarded to the University. Thus, I was pleased to meet Kawagoe at the fourth meeting of "Le Council International du Batimant pour Recherce et Documentation" (CIB/CTF). This was organized as a sub-group of the United Nations. We were participating at that time on an informal basis. The meeting was held in London in May

1960. Kawagoe, at that time, had spent part of a year as a guest worker at the Fire Research Station (FRS) Borehamwood. He contributed two papers at the meeting, the first on fire behavior in a compartment with a large window. The second involved a fire resistance test of a prestressed concrete beam.

The first part of the CIB/CTF meeting involved planning further experiments on the international study of behavior of fires in compartments. Five national laboratories had contributed data. I believe Kawagoe's paper involved a report on a proposed extension of this work with much larger compartments. He reported on his experience at FRS with one of these large enclosures.

Kawagoe's second paper described a fire resistant test on a prestressed concrete beam. I believe it was related to a cooperative study we had undertaken at NBS at the request of Dr. Lea, the Director of the UK Building Research Station. It involved the conduct of fire endurance tests of several pre-stressed concrete beams of greater size than would be possible at the Fire Research Station at that time. It developed that the beam had not performed as well as expected because of failure of the concrete cover of the reinforcing steel strands. I believe Kawagoe's experiment had shown that by using steel mesh at the lower edges of the concrete beam, spalling of concrete was greatly reduced and much better fire performance could be achieved.

My second meeting with Kawagoe was at the end of his year at FRS. He stopped on his trip home for brief visits in Washington. He visited the Fire Section at NBS on 24 April, 1961. Surely he was interested in the experimental unconfined crib fires as well as compartment fires being developed by Gross and many part time college students. These experiments were an outgrowth of, but not a part of, the CIB/CTF work that had been discussed in the UK. Surely too he must have been interested in the NBS large scale fire endurance furnaces, as well as other work we were doing. From this time on, Kawagoe or his associates attended and contributed much to the later meetings of CIB/CTF (or WG14).

Thus, in conclusion, I suggest that the award to me of the "Kawagoe Medal" may have resulted from three factors:

1. our early and continuing exchange of fire research information with Japan;

2. an appreciation of CIB related fire burn research being pursued by Gross and others in our group; and

3. the capability and competence we at NBS had for a wide range of fire studies.

I appreciate the personal honor of this award, but prefer to think of it as recognition of the work of the fire research staff that Kawagoe met and their later findings. I therefore suggest that we all take a moment of silence in memory of Kawagoe san and the contributions that he made to fire safety.